

REMARKS

The Office action mailed on 13 August 2003 (Paper No. 4) has been carefully considered.

The specification and Abstract are being amended to correct minor errors and improve form. Claims 1, 5, 7 thru 10, 13 and 15 thru 17 are being amended. Thus, claims 1 thru 20 are pending in the application.

On page 2 of the Office action, the Examiner rejected claims 1 thru 20 under 35 U.S.C. §102 for alleged anticipation by Kim *et al.*, U.S. Patent No. 6,437,496. For the reasons stated below, it is submitted that the invention recited in the claims, as now amended, is distinguishable from the prior art cited by the Examiner so as to preclude rejection under 35 U.S.C. §102 or §103.

Kim *et al.* '496 discloses a tension shadow mask and color cathode ray tube adopting the tensioned shadow mask. In Kim *et al.* '496, the cathode ray tube (CRT) includes a faceplate on an inner side, a phosphor screen, a tensioned mask and a frame assembly secured to the faceplate. A funnel is connected to the faceplate, the funnel having a neck portion in a cone portion, and an electron gun is disposed in the neck portion, while a deflection yoke is disposed on the cone portion of the funnel. The tensioned mask and frame assembly are generally shown in Figure 6, as identified by

reference numeral 50. The tensioned mask and frame assembly 50 includes tensioned mask 51, as well as frame 66 with the frame 66 being made up of supports 56a and 56b, as well as elastic members 56c and 56d.

Figure 7 of Kim *et al.* '496 is a partial enlarged view of the tensioned mask 51 of Figure 6. As seen in Figure 7, in the tensioned mask 51, a series of strips 53 are separated by slits 52 having a predetermined interval. The slits 52 are separated by tie bars 54 which interconnect adjacent strips 53' and 53", the slits 52 having a relatively large vertical pitch PV', compared to dummy bridges. In addition, a plurality of dummy bridges 55, which define the slits 52 at predetermined intervals, are disposed between the tie bars 54, the dummy bridges 55 extending between but not interconnecting adjacent strips 53' and 53".

The dummy bridges 55 include first and second protrusions 55a and 55b which extend between the adjacent strips 53' and 53", and which face each other, the first and second protrusions 53a and 53b not contacting each other.

Further referring to Figure 7, the length L1 of the dummy bridges 55 is greater than the length L2 at the tie bars 54, and the width W3 of the dummy bridges 55 is less than the width W4 of the tie bars 54.

Independent claims 1, 13 and 17 recite an apparatus or mask assembly having, among other elements, a mask having a screen part which includes first and second areas, with real slots being positioned in the first area and dummy slots being positioned in the second area. In addition to including real slots and dummy slots, the screen part also includes strip parts.

On pages 2, 5 and 6 of the Office action, the Examiner states the basis for rejecting independent claims 1, 13 and 17 by alleging that Figures 6 and 7 of Kim *et al.* '496 disclose "real slots (52), dummy slots (55), and strip parts (53)" (quoting from the Office action). However, the elements 55 referred to by the Examiner as "dummy slots" are, in fact, dummy bridges made up of protrusions 55a and 55b located between adjacent slits 52, as described above with reference to Figure 7 of Kim *et al.* '496. Thus, Kim *et al.* '496 does not disclose the screen part as including slits 52, dummy bridges 55 and strips 53' and 53". Therefore, a rejection under 35 U.S.C. §102 for alleged anticipation by Kim *et al.* '496 is clearly inappropriate. Moreover, Kim *et al.* '496 does not even suggest the provision of dummy slots as a part of the screen part, and thus the rejection under 35 U.S.C. §103 for alleged obviousness is also inappropriate.

As indicated above, each of independent claims 1, 13 and 17 also recites that the real slots are located in the first area and that the dummy slots are located in the second area. Since Kim *et al.* '496 does not disclose or even suggest the provision of dummy

slots, it is clear that there is no disclosure or suggestion whatsoever in Kim *et al.* '496 of real slots being located in a first area while dummy slots are located in a second area. Thus, on this basis as well, a rejection of independent claims 1, 13 and 17 under 35 U.S.C. §102 or §103 based on the disclosure of Kim *et al.* '496 is clearly inappropriate

In the latter regard, it should be noted that independent claims 1, 13 and 17 now recite that the screen part has a first area including a center region of the screen part, and a second area distinguishable from the first area and not including the center region of the screen part. In Figure 3 of the present application, the center region of the screen part corresponds to the portion in Figure 3 containing diagonal lines, whereas the non-center region of the screen part corresponds to the area not containing diagonal lines in Figure 3.

Furthermore, referring to Figure 3 of the present application, the first area, as represented by the dotted line circle shown in the diagonal dash lined portion of Figure 3, corresponds to the “first area including a center region of the screen part” as recited in claims 1, 13 and 17, whereas the dotted circle included in the white, non-lined portion of Figure 3 corresponds to the “second area distinguishable from the first area and not including the center region of the screen part” as recited in claims 1, 13 and 17.

Thus, further referring to Figure 3, the first area which includes the center region of the screen part includes real slots 20 separated by real bridges 24, rows of real slots 20

being separated by strips 22, whereas the second area located away from the center region of the screen part in Figure 3 includes dummy slots 20' separated by dummy bridges 26, rows of the dummy slots 20' being separated by strips 22.

In contrast, in Kim *et al.* '496, there is no distinction between a first area including a center region of the screen part and containing real slots, and a second area not including the center region of the screen part and containing dummy slots, as recited in amended claims 1, 13 and 17 of the present application. This provides a further basis for distinguishing the invention of the present application from the disclosure of Kim *et al.* '496.

On page 2 of the Office action, with regard to dependent claim 2, the Examiner alleges that Figures 7 and 15 of Kim *et al.* '496 disclose the subject matter recited in claim 2. However, for the reasons stated above relative to independent claims 1, 13 and 17, dependent claim 2 also recites the invention in a manner distinguishable from the disclosure of Kim *et al.* '496. In that regard, as mentioned above, Kim *et al.* '496 does not make a distinction between a first area including a center region of the screen part and a second area not including the center region of the screen part. Furthermore, in Kim *et al.* '496, there is no distinction between real slots and dummy slots, or between real bridges and dummy bridges, as recited in dependent claim 2.

Furthermore, with regard to the rejection of dependent claim 2, the Examiner relies on Figures 7 and 15 of Kim *et al.* '496. However, Figure 15 is described as merely a photo “illustrating the visibility of the bars reflected on a phosphor screen with respect to the area difference between the tie bars and dummy bridges of the tensioned masks” (quoting from column 3, lines 8-11 of Kim *et al.* '496). Thus, it is not clear how the photo of Figure 15 supports the allegations set forth by the Examiner at the bottom of page 2 of the Office action, with respect to the rejection of dependent claim 2.

The same observation relative to the photos of Figures 8-15 can be made with respect to the allegations set forth on pages 3-6 of the Office action with respect to the rejection of dependent claims 3, 5-16 and 18. In short, the photos do not support the allegations set forth by the Examiner with respect to these dependent claims.

In addition, with respect to the rejection of dependent claims 7-10 and 16, whereas the Examiner has made some allegations relative to the general language of these dependent claims, there is no allegation set forth by the Examiner in the Office action relative to disclosure or suggestion of the specific expressions contained within the last two lines of each of the dependent claims in question, specifically identifying the points P1 thru P6. Thus, for these additional reasons, the invention recited in those dependent claims is distinguishable from the prior art cited by the Examiner.

To summarize, Kim *et al.* '496 does not disclose or suggest the apparatus or mask assembly recited in independent claims 1, 13 and 17 of the present application. In that regard, even if the Examiner is contending that the slits 52 of Figure 7 of Kim *et al.* '496 correspond to the recited “real slots”, and that the portions between the slits 52 and interconnecting the slits 52, adjacent to the dummy bridges 55, constitute the recited “dummy slots”, there are three problems with such an analysis by the Examiner: (1) the characterization of slits 52 as “real slots” does not correspond to the definition of “real slots” demonstrated by elements 20 in Figure 3 of the present application; (2) the characterization of the portions interconnecting adjacent slits 52 in Figure 7 of Kim *et al.* '496, and adjacent to the portions of the dummy bridges 55, as “dummy slots” does not correspond to the definition of dummy slots as demonstrated by elements 20' in Figure 3 of the present application; and (3) the characterizations set forth by the Examiner does not take into account the location of the real slots in a first area which includes a central portion of the screen part, and location of the dummy slots in a second area which does not include the central portion of the screen part, in accordance with the invention.

In view of the above, it is submitted that the claims of this application are in condition for allowance, and early issuance thereof is solicited. Should any questions remain unresolved, the Examiner is requested to telephone Applicant's attorney.

No fee is incurred by this Amendment.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "R. E. Bushnell", written over a horizontal line.

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